

## CLAIMS

1. A process for producing a petroleum resin which comprises subjecting a cyclopentadiene based compound and a vinyl-substituted aromatic compound substantially free from a high molecular weight substance to copolymerization reaction in the presence of a solvent.

2. A process for producing a hydrogenated petroleum resin which comprises subjecting a cyclopentadiene based compound and a vinyl-substituted aromatic compound substantially free from a high molecular weight substance to copolymerization reaction in the presence of a solvent and thereafter to hydrogenation reaction.

3. A hydrogenated petroleum resin which is produced by the process as set forth in Claim 2, and which has a maximum molecular weight as determined by gel permeation chromatography (GPC) being 18000 or lower.

4. A hot melt adhesive composition which comprises the hydrogenated petroleum resin as set forth in Claim 3.